

IN THE CLAIMS:

Please amend the claims as follows:

34. (Currently amended) A method for providing transaction services in an ATM or Kiosk comprising the steps of:

providing the ATM or Kiosk, the ATM or Kiosk having at least one transaction device type, with the capabilities of transaction devices within the transaction device type being non-identical between more than one ATM or Kiosk across a network of ATMs or Kiosks, said ATM or Kiosk being controlled by at least one software application and an operating system, both of which are installed in the ATM or Kiosk;

wherein the at least one software application interacts with said transaction device type through a programming interface of middleware software comprising transaction objects;

wherein the transaction services provided by the transaction objects depend on the capabilities of the transaction device type, but the programming interface of the transaction objects is independent of the capabilities of the transaction device

operating a computer-based transaction machine controlled by at least one software application to effect a transaction service for an end user;

interacting said software application with a functional interface of a middleware software layer on the computer-based transaction machine which extends the functionality of a computer operating system by providing the functional interface for the computer operating system to be written to, the computer operating system providing control functions of said

~~computer based transaction machine and the functional interface providing an ability to co-operate with a dissimilar network;~~

~~wherein said computer based transaction machine is coupled to at least one transaction device; and~~

~~said functional interface provides functionality adapted to the particular hardware of said transaction machine and said transaction device by interrogating the computer based transaction machine to determine capability of the at least one transaction device and dynamically configuring the transaction services based on the capability.~~

35. (Original) The method of Claim 34 wherein said transaction machine further comprises a data communications interface and wherein said transaction machine is adapted to communicate over said data communications interface.

Claim 36. (Cancelled)

37. (Currently amended) A method for providing transaction services according to Claim 34 wherein the transaction objects are controls for performing standardized device functions ~~said middleware software comprises a series of transaction objects and controls for performing standardized device functions.~~

38. (Original) A method for providing transaction services according to Claim 37 wherein said transaction machine further comprises a customizable user interface.

39. (Original) A method for providing transaction services according to Claim 38 wherein said transaction objects are independent of said user interface.

40. (Original) A method for providing transaction services according to Claim 39 further comprising a plurality of controls, at least one of which comprises a capabilities interface.

41. (Original) A method for providing transaction services according to Claim 40 wherein the capabilities interface can communicate the capabilities of the control.

42. (Original) A method for providing transaction services according to Claim 37 wherein applications, objects and controls are concurrently operable.

43. (Original) A method for providing transaction services according to Claim 37 wherein controls are constructed with an event generating capability and wherein a said controls are operable in a selectable mode in which said events are queued up and delivered to an application on demand.

44. (Original) A method for providing transaction services according to Claim 34 wherein said middleware software is adapted to provide service in accordance with at least one software standard for interacting with different hardware systems.

45. (Original) The method for providing transaction services according to Claim 44 wherein said at least one software standard is selected from a group consisting of WOSA XFS, OPOS, OFX, TOPEND®, ActiveX®, Javabeans, SNMP.

46. (Original) A method for providing transaction services according to Claim 34 wherein all errors and transgressions are asserted by the middleware software.

47. (Original) A method for providing transaction services according to Claim 34 further comprising the step of the middleware software writing trace data to memory and then copies it to disk only when the transaction machine is idle.

48. (Original) A method for providing transaction services according to Claim 34 further comprising a web browser.

49. (Original) A method for providing transaction services according to Claim 48 where said at least one software application is operable from within said web browser environment.

50. (Original) A method for providing transaction services according to Claim 49 wherein said web browser provides support for software distribution.

51. (Original) A method for providing transaction services according to Claim 49 further comprising a web browser frame containing at least one device control operable to detect events which must be responded to upon occurrence.

52. (Original) A method for providing transaction services according to Claim 48 wherein said middleware software comprises a plurality of COM components having a scriptable ActiveX® interface.

53. (Original) A method for providing transaction services according to Claim 48 wherein said middleware software comprises a plurality of Javabeans™ components having a scriptable interface.

54. (Original) A method for providing transaction services according to Claim 48 wherein said web browser is adapted to communicate with conventional web sites to be displayed by the computer-based transaction machine.

55. (Original) A method for providing transaction services according to Claim 48 wherein middleware software allows or disallows access to particular web sites according to a rule database.

56. (Original) A method for providing transaction services according to Claim 48 wherein middleware software is adapted to customize time-out of the display of individual internet web sites.

57. (Original) A method for providing transaction services according to Claim 34 wherein the computer-based transaction machine is adapted to allow the software applications and middleware to be altered across a network by an authority.

58. (Original) A method for providing transaction services according to Claim 34 wherein the transaction machine is adapted to communicate status information to a remote station.

59. (Original) The method for providing transaction service of Claim 37 wherein said at least one of said transaction objects provide, separately or in combination with other transaction objects and controls, encapsulation of software logic required for performing at least a portion of a transaction.

60. (Original) The method of Claim 37 wherein at least one of said controls is a device control, providing abstraction of details of a device controlled by said device control.

61. (Original) The method of Claim 37 further comprising the step of creating a separate thread for each of a plurality of controls.

62. (Original) The method of Claim 35 further comprising the step of enabling said application program to communicate over said communication interface through a control.

63. (Original) The method of Claim 37 wherein at least one of said controls implements an OFX interface or a portion thereof, to facilitate communication with an OFX server.

64. (Original) The method of Claim 34 wherein said middleware software provides generic error handlers.

65. (Original) The method of Claim 35 further comprising configuring a plurality of transaction machines, and wherein configuration data for said step of configuring is centrally held in a distribution file.

66. (Original) The method of Claim 38 further comprising the step of constructing said user interface using common web authoring tools.

67. (Original) The method of Claim 34 wherein said operating system is Microsoft Windows NT.

68. (Currently amended) An ATM or Kiosk comprising at least one transaction device type with the capabilities of transaction devices within the transaction device type being non-identical between more than one ATM or Kiosk across a network of ATMs or Kiosks, said ATM or Kiosk being controlled by at least one software application and an operating system which are installed in the ATM or Kiosk and which control and receive information from said transaction device type; through a programming interface of

middleware software comprising transaction objects, wherein transaction services provided by the transaction objects depend on the capabilities of the transaction device type but the programming interface of the transaction objects is independent of the capabilities of the transaction device

A computer based transaction machine comprising:
at least one transaction device, having a set of capabilities inherent thereto;
an operating system and middleware installed on the transaction machine to communicate with, and control said transaction device;
at least one software application having a user interface, and adapted for execution under control of said operating system;
a web browser;
middleware software adapted to interact with said operating system and with said software application, said middleware software having a functional interface adapted to provide an interface to particular hardware capabilities of said transaction machine; and,
wherein said middleware software further comprising an application programming interface adapted to provide communication and control services with said transaction device to said software application, all errors and transgressions are asserted by the middleware software, the middleware software writes trace data to memory and then copies the trace data to disk only when the transaction machine is idle, the middleware software allows or disallows access to particular web sites according to a rule database and the middleware software is adapted to customize time out of the display of individual internet web sites.

69. (Currently amended) The ATM or Kiosk computer based transaction machine of Claim 68 wherein said ATM or Kiosk transaction machine further comprises a data communications interface and wherein said ATM or Kiosk transaction machine is adapted to communicate over said data communications interface.

Claim 70. (Cancelled)

71. (Currently amended) An ATM or Kiosk A computer based transaction machine according to Claim 68 wherein the transaction objects are controls for performing standardized device functions said middleware software comprises a series of transaction objects and controls for performing standardized device functions.

72. (Currently amended) An ATM or Kiosk A computer based transaction machine according to Claim 71 wherein said ATM or Kiosk transaction machine further comprises a customizable user interface.

73. (Currently amended) An ATM or Kiosk A computer based transaction machine according to Claim 72 wherein said transaction objects are independent of said user interface.

74. (Currently amended) An ATM or Kiosk A computer based transaction machine according to Claim 73 further comprising a plurality of controls, at least one of which comprises a capabilities interface.

75. (Currently amended) An ATM or Kiosk ~~A computer based transaction machine~~ according to Claim 74 wherein the capabilities interface can communicate the capabilities of the control.

76. (Currently amended) An ATM or Kiosk ~~A computer based transaction machine~~ according to Claim 71 wherein applications, objects and controls are concurrently operable.

77. (Currently amended) An ATM or Kiosk ~~A computer based transaction machine~~ according to Claim 68 wherein controls are constructed with an event generating capability and wherein a said controls are operable in a selectable mode in which said events are queued up and delivered to an application on demand.

78. (Currently amended) An ATM or Kiosk ~~A computer based transaction machine~~ according to Claim 68 wherein said middleware software is adapted to provide service in accordance with at least one software standard for interacting with different hardware systems.

79. (Currently amended) The ATM or Kiosk ~~The computer based transaction machine~~ according to Claim 78 wherein said at least one software standard is selected from a group consisting of WOSA XFS, OPOS, OFX, TOPEND®, ActiveX®, Javabeans, SNMP.

Claims 80-82 cancelled.

83. (Currently amended) An ATM or Kiosk ~~A computer-based transaction machine according to Claim 68~~ 82 wherein said at least one software application is operable from within a ~~said~~ web browser environment.

84. (Currently amended) An ATM or Kiosk ~~A computer-based transaction machine according to Claim 83~~ wherein a ~~said~~ web browser provides support for software distribution.

85. (Currently amended) An ATM or Kiosk ~~A computer-based transaction machine~~ according to Claim 83 further comprising a web browser frame containing at least one device control operable to detect events which must be responded to upon occurrence.

86. (Currently amended) An ATM or Kiosk ~~A computer-based transaction machine~~ according to Claim 68 82 wherein said middleware software comprises a plurality of COM components having a scriptable ActiveX® interface.

87. (Currently amended) An ATM or Kiosk ~~A computer-based transaction machine~~ according to Claim 68 82 wherein said middleware software comprises a plurality of Javabeans™ components having a scriptable interface.

88. (Currently amended) An ATM or Kiosk A computer-based transaction machine according to Claim 68 ~~82~~ wherein a ~~said~~ web browser is adapted to communicate with conventional web sites to be displayed by the ATM or Kiosk computer-based transaction machine.

Claims 89 and 90 cancelled.

91. (Currently amended) An ATM or Kiosk A computer-based transaction machine according to claim 68 wherein the ATM or Kiosk computer-based transaction machine is adapted to allow the software applications and middleware to be altered across a network by an authority.

92. (Currently amended) An ATM or Kiosk A computer-based transaction machine according to claim 68 wherein the ATM or Kiosk transaction machine is adapted to communicate status information to a remote station.

93. (Currently amended) The ATM or Kiosk The computer-based transaction machine of claim 71 wherein said at least one of said transaction objects provide, separately or in combination with other transaction objects and controls, encapsulation of software logic required for performing at least a portion of a transaction.

94. (Currently amended) The ATM or Kiosk ~~The computer-based transaction machine~~ of claim 71 wherein at least one of said controls is a device control, providing abstraction of details of a device controlled by said device control.

95. (Currently amended) The ATM or Kiosk ~~The computer-based transaction machine~~ of claim 71 further comprising the step of creating a separate thread for each of a plurality of controls.

96. (Currently amended) The ATM or Kiosk ~~The computer-based transaction machine~~ of claim 71 further comprising the step of enabling said application program to communicate over said communication interface through a control.

97. (Currently amended) The ATM or Kiosk ~~The computer-based transaction machine~~ of claim 71 wherein at least one of said controls implements an OFX interface or a portion thereof, to facilitate communication with an OFX server.

98. (Currently amended) The ATM or Kiosk ~~The computer-based transaction machine~~ of Claim 68 wherein said middleware software provides generic error handlers.

99. (Currently amended) The ATM or Kiosk ~~The computer-based transaction machine~~ of Claim 69 further comprising configuring a plurality of ATMs or Kiosks ~~transaction machines~~, and wherein configuration data for said step of configuring is centrally held in a distribution file.

100. (Currently amended) The ATM or Kiosk ~~The computer based transaction machine~~ of Claim 72 further comprising the step of constructing said user interface using common web authoring tools.

101. (Currently amended) The ATM or Kiosk ~~The computer based transaction machine~~ of Claim 68 wherein said operating system is Microsoft Windows NT.

102. (Currently amended) A network comprising a plurality of ATMs or Kiosks ~~computer based transaction machines~~ according to Claim 68, one or more networking means and one or more application servers.

103. (Currently amended) An Extranet formed by combining a plurality of networks of ATMs or Kiosks ~~computer based transaction machines~~ according to Claim 102.

104. (Currently amended) An Extranet according to Claim 103 provided with a security mechanism which limits the hardware functionality available to individual software applications.

105. (Currently amended) A method of providing transaction services according to claim 34 wherein said ATM or Kiosk ~~computer based transaction machine~~ is operated by a first organization, wherein said software application is provided by a second

organization, and wherein said software application provides a transaction type different than the transaction type associated with said first organization.

106. (Previously Presented) A method for selling tickets comprising the steps of:

operating, by a first organization, a computer based automated teller machine of a first network, the computer based automated teller machine having a data communication interface, a display device, an input device, and at least one transaction device adapted for user identification;

executing a software application on said computer based automated teller machine, said software application being adapted to issue tickets for events or services provided by a second organization through a second network, wherein the second network is dissimilar to the first network and the software application allows cooperation directly therebetween; and,

automatically charging a user account for said ticket utilizing facilities provided by said automated teller machine.

107. (Original) The method of selling tickets of Claim 106 wherein said tickets are selected from a list comprising airline tickets, cinema tickets and theatre tickets.

108. (Original) A method for selling tickets comprising the steps of:

operating, by a first organization, a computer based kiosk having a data communication interface, a display device, an input device, and at least one transaction device adapted for user identification;

executing a software application on said computer based kiosk, said software application being adapted to issue tickets for events or services provided by a second organization; and,

automatically charging a user account for said ticket utilizing facilities provided by said kiosk.

109. (Original) The method of selling tickets according to claim 108 wherein said tickets are selected from a list comprising airline tickets, cinema tickets and theatre tickets.

110. (Previously Presented) A method for providing transaction services according to Claim 34, further comprising the step of creating an event thread associated with each transaction service for insuring that device states persist from one application page to another.

111. (Previously Presented) A method for providing transaction services according to Claim 34, further comprising the step of encapsulating essential software logic of the transaction services so that an associated user interface is freely defined.